

# Work Evaluation of the Construction Supervisory Consultants in Denpasar City

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Received: 25 Jul 2022; Received in revised form: 10 Aug 2021; Accepted: 17 Aug 2022; Available online: 23 Aug 2022

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**Abstract**— The purpose of the study is to analyse the work of the supervisory consultant based on the criteria of the Indonesian National Work Competency Standards and to formulate efforts to improve the work of the supervisory consultant using AHP method and gap analysis. The result shows that on the government projects, the work of the supervising consultants in Denpasar City, especially on the criteria of the ability for controlling quality, design dimension, cost, and time; supervising the implementation of the work methods; evaluating and reporting the contractor works; and understanding the contract documents are in “good” category. Meanwhile, the result indicates that on private projects, the work of supervisory consultants, in terms of the ability to control quality, cost, time and design dimensions are in the “very good” category; the ability to supervise the application of work methods is in “good” category. In the government project, the client prioritizes the ability of the supervisory consultants in terms of ability to control quality, dimensions, cost, and time, to understand the contract documents, supervise the work methods, and evaluate and report the contractor's performance. Whereas in private projects, the client prioritizes the capabilities of the supervisory consultants in terms of the ability to control the project quality, design dimensions, cost, and time, to evaluate and report the contractor's performance.

**Keywords**— Supervisory Consultant Performance, Gap Analysis, AHP

## I. INTRODUCTION

Consultants have an important role in the success of the project. Based on direct observations in the field and interviews as a preliminary study, it has been found that most of the supervisory consultant service providers in Denpasar City still have not implemented work standards following SKKNI (Indonesian National Work Competency Standards). For example, from the results of interviews with 5 supervisory consultants in Denpasar City, 3 supervisory consultants do not understand their job desk, one of which is controlling quality, design dimensions, costs, and time which are the factors that must be met by the supervisory consultant following the SKKNI standards. consequently, it often risks a project delay. In this situation, the client (service users/ owners of the project) will judge the consultant's performance as not good, and so

conflicts often occur between them, which cause a bad impact on the image of the supervisory consulting company in the future.

To survive in the competition, every consulting firm must improve its professionalism. One of them is to provide Consultant services that fulfil the client's needs and must comply with SKKNI standards. The client's needs on private projects and government projects will certainly be different, for example in government projects, supervisory consultants in addition to monitoring the quality of work, supervisory consultants are also required to understand administrative documents because, in government projects, the administration is also one of the important job desks that must be mastered by the government. Meanwhile, in private projects, supervisory consultants are not required to master administrative documents but emphasize the quality

of work. Accordingly, it is important to evaluate the performance of supervisory consultants in Denpasar City based on SKKNI, viewing from the client's perspective, on both government projects and private projects. The result is used for developing efforts for improving the consultant's performance that meet the client's need and therefore improves the client's satisfaction.

## II. LITERATURE REVIEW

### 2.1. Monitoring Activities

Supervision is a process of determining performance measures of taking action that can support the achievement of the expected results by the predetermined measures [1]. Supervision is determined as a process of monitoring the performance of the workforce based on standards to measure performance, ensure the quality of performance appraisals, and retrieve information that can be used as feedback on achieving results that are communicated to the workforce [2]. Supervision is part of the management function which seeks to ensure that the plans that have been set can be achieved effectively and efficiently. So it can be concluded that supervision is an act of monitoring

or checking construction project activities to ensure the achievement of objectives following the previously determined plan, and take corrective actions needed to correct previous errors [3]. Effective supervision helps businesses organize work so that it can be carried out properly. The supervisory function is the last function of the management process. This function consists of monitoring and evaluating construction project activities so that construction project targets are achieved. In other words, the supervisory function understands whether the plans set out in the planning function have been achieved.

### 2.2. The Indonesian National Work Competency Standards (SKKNI) Supervisory Consultants

The Indonesian National Work Competency Standard, hereinafter abbreviated as SKKNI (in Indonesian term), is a workability formulation that includes aspects of knowledge, skills, and/or expertise as well as work attitudes that are relevant to the implementation of duties and job requirements stipulated by the applicable laws and regulations [4].

*Table 1. SKKNI Performance Variables*

Competency Element	Performance Criteria
1. Mastering contractor contract documents and supervising consultants	1.a Understand the contract work agreement letter/contractor and supervising consultant 1.b Study and understand special specifications and technical specifications 1.c Learn and understand CC (Condition of Contract) 1.d Study and understand the list of quantities and unit prices of BoQ (Bill of Quantity) 1.e Studying and understanding contract drawings and their implementation in the field
2. Conducting initial construction meeting/PCM (Pre Construction Meeting)	2.a Evaluating work plans and schedules and approving work methods proposed by contractors 2.b Equating perceptions or interpretations of the contents of contract documents 2.c Agree on the procedures for the management (administrative) elements of project implementation
3. Surveying the existing field conditions	3.a Conduct a joint survey (contractor+consultant+owner) on the real conditions in the field 3.b Comparing plan drawings with real field conditions 3.c Perform value engineering and design reviews
4. Inspecting the contractor's readiness to carry out the work	4.a Receive and check the proposed request/permit for the implementation of the work and its supporting procedures 4.b Check contractor readiness regarding resources (tools, materials, and labor) 4.c Re-approved the volume and unit price BOQ (Bill of Quantity)
5. Supervising the application of work methods per type of work	5.a Supervise the application of work methods for carrying out work 5.b Supervise the implementation of K3 (Occupational Health and Safety) 5.c Supervise environmental pollution control and safety

6. Conducting quality control, dimensions, costs, and time	6.a Carry out quality control
	6.b Carry out dimensional control
	6.c Carry out cost control
	6.d Doing time control
	6.e Documenting the procedures, procedures, and results of quality control, dimensions, costs, and time
7. Conducting weekly and non-scheduled coordination meetings (special)	7.a Conduct weekly internal meetings
	7.b Conducting meetings with other institutions (special meetings)
	7.c Follow up on meeting results
	7.d Documenting the minutes/results of the meeting
8. Joint at the measurements of contractor's work for paymentss	8.a Application of procedures for measuring the volume of work
	8.b Application of procedures and procedures for calculating work results
	8.c Accept or reject and approve the results of calculating the volume of work for payment
9. Providing Payment certificate	9.a Monitoring retention money deductions, advances, materials on site, tax penalties
	9.b Perform escalation and or de-escalation calculations
	9.c Application of payment procedures and procedures, terms, key submission (turnkey)
	9.d Minimize environmental pollution
10. Evaluating contractor performance, reporting, and submitting work	10.a Assessing the performance of the implementation of work in terms of quality and quantity based on certain criteria
	10.b Make a report and recommend that the first submission of work (PHO) can be carried out.
	10.c Create and check the maintenance program for the maintenance period
	10.d Supervise the maintenance period (period) of maintenance
	10.e Prepare reports recommending and engaging in the final submission of work (FHO).

### III. RESEARCH METHOD

This research was conducted on supervisory consultants that took on government construction projects and private construction projects in Denpasar City. It is begun with a preliminary study to identify the problem, and the identified problems are reviewed through a literature review. Subsequently, the research questionnaire is designed. Before conducting the survey, the questionnaire is tested for validity and reliability. Then, the questionnaire is distributed to a predetermined sample, then the data is recapitulated and a gap analysis is carried out which ended with conclusions and suggestions.

The research method for each research aims, are as follow:

1. To evaluate the work of consultant, survey using questionnaire is conducted, involves 84 Respondents, consist of consultants, contractors, and clients of the government and private construction projects

2. To assess the criteria for consultants who perform well, a survey using questionnaire is conducted involves 40 respondents.
3. To formulate effort to improve the consultants' works, FGD is conducted, with 8 respondents, consist of clients and consultant leaders.

### IV. RESULT AND DISCUSSION

- 4.1. Evaluation of the Construction Supervisory Consultants' Works following the SKKNI indicators using AHP analysis.

The first step is to weigh/value the indicators of the Indonesian National Work Competency Standard/ SKKNI using the Analytical Hierarchy Process (AHP). This involves 3 experts that have more than 10 years of experience in their field. These 3 respondents consist of 2 consultants and 1 project owner/client. The respondents are required to weigh the importance level of indicators amongst other indicators of SKKNI. The result is

presented in Fig 1. Fig 1 shows 10 variables, that each of them consists of indicators with its weight. For example, variable “A” consists of 5 indicators. Based on its weight, indicator A5 has the highest weight. This indicator’s weight is used to define the value of supervisory consultants works, by multiplying them with the data from the survey.

The second step is to measure and compare the work of the supervisory consultants on government construction

projects and private construction projects. In this context, there are two groups of samples, i.e. the samples who those experience handling government construction projects (39 respondents), and the others are those who experience handling private construction projects (45 respondents).

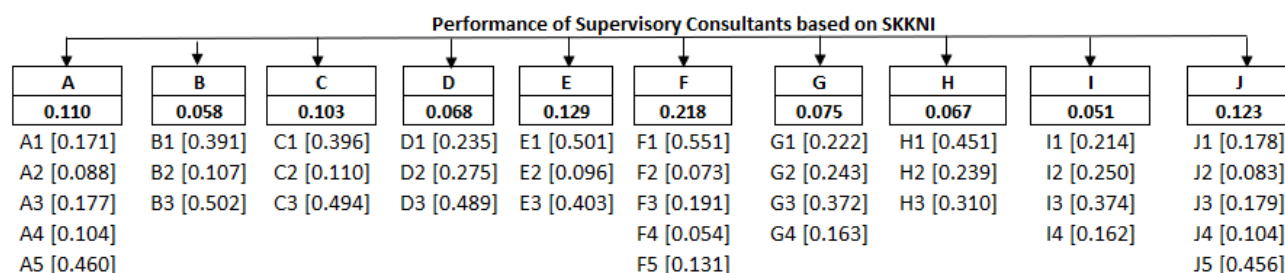


Fig. 1: Criteria and Sub-criteria Weight Value

#### 4.1.1. Results of Supervisory Consultants' Work on Government Construction Projects

The works of supervisory consultants on government projects are measured using the questionnaire survey distributed to 39 respondents. These consist of supervisory consultants and project owners/clients those experienced in handling government projects. The data from the survey is analysed to result in the value of the works of the supervisory consultant. This value is multiplied by the weight of SKKNI's indicators resulting from AHP analysis (see the first step/ Fig. 1). The work of the supervisory consultant is categorised as “very good” if the value is between 0.5681-0.7357, categorised as “good” if the value is between 0.4005-0.5681, categorised as “acceptable” if the value is between 0.2330-0.4005, and categorised as “poor” if the value is between 0.0654-0.2330.

As indicated in Table 2, out of 10 indicators of SKKNI, it is found that there is 1 indicator that has a “very good” score, namely F (Conducting quality control, dimensions, costs, and time) getting a value of 0.600. 2 indicators are categorized as “good”, namely E (supervising the application of work methods per type of work) and J (evaluating the work of contractors, reporting and submitting work). 1 indicator is categorized as “acceptable”, namely A (mastering contractor contract documents). 6 indicators are categorized as “poor”, namely B (conducting initial construction/PCM meetings), C (surveying existing conditions), D (conducting a contractor readiness check for work implementation), G (conducting weekly and non-scheduled coordination meetings), H (joint at the measurements of contractor’s work for payments) and I (providing payment certificates).

Table 2. The work of the Supervisory Consultant on Government Projects following the SKKNI's indicators

SKKNI's Indicator		Weight	Mode	Evaluation	Description
A	Mastering contractor contract documents	0.110	3	0.299	Acceptable
B	Conducting initial construction/PCM meetings	0.058	1	0.070	Poor
C	Surveying existing conditions	0.103	2	0.217	Poor
D	Conducting a contractor readiness check for work implementation	0.068	2	0.152	Poor
E	Supervising the application of work methods per type of work	0.129	3	0.335	Good
F	Conducting quality control, dimensions, costs, and time	0.218	3	0.600	Very Good
G	Conducting weekly and non-scheduled coordination meetings	0.075	2	0.167	Poor
H	Joint at the measurements of contractor's work for payments	0.067	1	0.118	Poor

I	Providing payment certificates	0.051	1	0.062	Poor
J	Evaluating the work of contractors, reporting and submitting work	0.123	3	0.325	Good

#### 4.1.2. Results of Supervisory Consultants' Work on Private Projects

The works of supervisory consultants on government projects are measured using the questionnaire survey distributed to 45 respondents. These consist of supervisory consultants and project owners/clients those experienced in handling private projects. The data from the survey is analysed to result in the value of the works of the supervisory consultant. This value is multiplied by the weight of SKKNI's indicators resulting from AHP analysis (see the first step).

Table 3 depicts that the work of the supervisory consultant is categorized as "very good" if the value is between 0.5781-0.7311, the work of the supervisory consultant is categorized as "good" if the value is between 0.4251-0.5781, the work of the supervisory consultant is categorized as "acceptable" if the value is between 0.2721-0.4251 and the work is categorized as "poor" if the value is between 0.1192-0.2721.

As indicated in Table 3, the work of supervisory consultants on government projects measured based on 10 indicators of SKKNI suggests that 1 variable is categorized as a very good value, namely F (Conducting quality control, dimensions, costs, and time) getting a value of 0.608. There is 1 indicator categorized as "acceptable", namely E (supervising the application of work methods per type of work). There are 8 indicators are categorized as "poor", namely A (mastering contractor contract documents), B (conducting initial construction/PCM meetings), C (surveying existing conditions), D (conducting a contractor readiness check for work implementation), G (Conducting weekly and non-scheduled coordination meetings), H (Joint at the measurements of contractor's work for payments), I (Providing payment certificates), and J (evaluating the work of contractors, reporting and submitting work).

Table 3. The results of the work of the Supervisory Consultant on Private Projects

	SKKNI's Indicators	Weight	Mode	Evaluation	Description
A	Mastering contractor contract documents	0.110	1	0.161	Poor
B	Conducting initial construction/PCM meetings	0.058	3	0.174	Poor
C	Surveying existing conditions	0.103	2	0.257	Poor
D	Conducting a contractor readiness check for work implementation	0.068	1	0.124	Poor
E	Supervising the application of work methods per type of work	0.129	3	0.387	Acceptable
F	Conducting quality control, dimensions, costs, and time	0.218	2	0.608	Very Good
G	Conducting weekly and non-scheduled coordination meetings	0.075	2	0.214	Poor
H	Joint at the measurements of contractor's work for payments	0.067	3	0.217	Poor
I	Providing payment certificates	0.051	4	0.164	Poor
J	Evaluating the work of contractors, reporting and submitting work	0.123	1	0.177	Poor

#### 4.2. Criteria for Consultants Who Perform Well According to Client's Needs and Meet Customer Satisfaction

To determine the criteria for Consultants Who Perform Well According to Client's Needs and Meet Customer Satisfaction is measured by the level of importance of the SKKNI's criteria that is expected by the owners/clients.

#### 4.3. The Level of Important criteria for Supervisory Consultants on Government Projects.

The level of importance of the supervisory consultant's performance is analyzed using the data obtained from the

questionnaire survey (20 respondents) provided by the owner/ clients, that subsequently multiplied by the weight of the value obtained from AHP processing. Table 4 presents the need for the supervisory consultant is categorized as "very important" if the value is between 0.7890-1.0197, and the work of the supervisory consultant is "important" if the value is between 0.5584-0.7890. Meanwhile, the work of the supervisory consultant is categorized as "moderately important" if the value is between 0.3277-0.5584, and the work is said to be "not important" if the value is between 0.097-0.3277.



Table 4 shows the results of the work of supervisory consultants on government projects measured by 10 indicators of SKKNI. There is 1 indicator is categorized as "very good", namely F (Conducting quality control, dimensions, costs, and time). 3 values are categorized as "moderately important", namely A (mastering contractor contract documents and supervision consultants) with a value of 0.409, E (supervising the application of work methods per type of work) with a value of 0.439, and J

(evaluating contractor performance, reporting, and submission of work) with a value of 0.401. While the remaining 6 indicators are categorized as "not important", namely B (conducting initial construction/PCM meetings), C (surveying existing conditions), D (conducting a contractor readiness check for work implementation), G (conducting weekly and non-scheduled coordination meetings (special), H (conducting joint measurements for payments) and I (product payment certificates)

*Table 4. Level of Interest of Supervisory Consultants in Government Projects*

	SKKNI's Indicators	Weight	Mode	Evaluation	Description
A	Mastering contractor contract documents	0.110	4	0.409	Moderately Important
B	Conducting initial construction/PCM meetings	0.058	3	0.203	Not Important
C	Surveying existing conditions	0.103	3	0.309	Not Important
D	Conducting a contractor readiness check for work implementation	0.068	3	0.237	Not Important
E	Supervising the application of work methods per type of work	0.129	4	0.439	Moderately Important
F	Conducting quality control, dimensions, costs, and time	0.218	4	0.831	Very Important
G	Conducting weekly and non-scheduled coordination meetings	0.075	3	0.237	Not Important
H	Joint at the measurements of contractor's work for payments	0.067	2	0.134	Not Important
I	Providing payment certificates	0.051	2	0.102	Not Important
J	Evaluating the work of contractors, reporting and submitting work	0.123	4	0.401	Moderately Important

#### 4.4. The Level of Important criteria for Supervisory Consultants on Private Projects

The level of importance for the supervisory consultant's performance is analysed using the data obtained from the questionnaire survey (45 respondents) provided by the owner/ clients and consultants, that subsequently multiplied by the weight of the value obtained from AHP processing. Table 5 explains the need for a supervisory consultant is categorized as "very important" if the value is between 0.5723-0.7141, categorized as "important" if the value is between 0.4305-0.5723, categorized as "moderately important" if the value is between 0.2888-0.4305 and categorized as "not important" if the value is between 0.1470-0.2888. Table 5 presents the work indicator that should be owned by supervisory consultants on private projects, which is evaluated by 10 indicators of SKKNI. There is 1 indicator categorized as a "very good"

score, namely F (Conducting quality control, dimensions, costs, and time). There are 3 values categorized as "moderately important" namely C (surveying existing conditions) with a value of 0.319, E (supervising the application of work methods) with a value of 0.412, and J (evaluating contractor performance, reporting, and submission of work) with the value of 0.315. The remaining 6 received a "not important", namely A (mastering contractor contract documents and supervising consultants), B (conducting initial construction/PCM meetings), D (conducting contractor readiness checks for work implementation), and G (conducting weekly and non-scheduled coordination meetings), H (conducting joint measurements for payments) and I (producing payment certificates)

Table 5. Level of Important of Criteria for Supervisory Consultants on Private Projects

	SKKNI's Indicators	Weight	Mode	Evaluation	Description
A	Mastering contractor contract documents	0.110	2	0.268	Not Important
B	Conducting initial construction/PCM meetings	0.058	4	0.209	Not Important
C	Surveying existing conditions	0.103	3	0.319	Moderately Important
D	Conducting a contractor readiness check for work implementation	0.068	2	0.152	Not Important
E	Supervising the application of work methods per type of work	0.129	4	0.412	Moderately Important
F	Conducting quality control, dimensions, costs, and time	0.218	3	0.600	Very Important
G	Conducting weekly and non-scheduled coordination meetings	0.075	4	0.220	Not Important
H	Joint at the measurements of contractor's work for payments	0.067	4	0.180	Not Important
I	Providing payment certificates	0.051	4	0.174	Not Important
J	Evaluating the work of contractors, reporting and submitting work	0.123	2	0.315	Moderately Important

### 3.3 Efforts to Improve The Work of Construction Supervisory Consultant Services in Denpasar City

To find out what needs to be improved on each consultant's needs, it is necessary to do a gap analysis. Gap analysis is carried out to see whether the need for supervisory consultant services has been carried out following the expected conditions or not. In this study, the gap is seen based on the difference in value between the level of importance and the level of implementation. The level of importance is a condition that is expected from every need for a supervisory consultant. While the level of implementation shows the real conditions in the field.

### 3.4 The Gap Needs for Supervisory Consultants on Government Projects

As presented in Table 6. shows, it can be seen that the gap value ranges from 0.016-0.231, which means that the gap is in the low to very high category. Among the 10 criteria of SKKNI that should be performed by the supervisory consultants on government projects, 5 of them are in the

medium gap category, 1 is in the very high gap category and 4 are in the low gap category. This means that these 6 indicators will be needed for supervisory consultant services to improve their work performance on government projects. These 6 indicators are:

1. A = mastering contractor contract documents and supervising consultants
2. B = conduct initial construction meeting/PCM
3. C = survey the existing condition
4. D = Inspect the contractor's readiness to carry out the work
5. E = supervising the application of work methods per type of work
6. F = Conducting quality control, dimensions, costs, and time

Table 6. The gap in the Need for Supervisory Consultants on Government Projects

	SKKNI's Indicator	Important Criteria	Work Result	Gap
A	Mastering contractor contract documents	0.409	0.299	0.110
B	Conducting initial construction/PCM meetings	0.203	0.070	0.133
C	Surveying existing conditions	0.309	0.217	0.092
D	Conducting a contractor readiness check for work implementation	0.237	0.152	0.085
E	Supervising the application of work methods per type of work	0.439	0.335	0.104

F	Conducting quality control, dimensions, costs, and time	0.831	0.600	0.231
G	Conducting weekly and non-scheduled coordination meetings	0.237	0.167	0.071
H	Joint at the measurements of contractor's work for payments	0.134	0.118	0.016
I	Providing payment certificates	0.102	0.062	0.040
J	Evaluating the work of contractors, reporting and submitting work	0.401	0.325	0.076

### 3.5 GAP Needs for Supervisory Consultants on Private Projects

Table 7 shows that in terms of the gap, it can be seen that the gap value ranges from -0.037-0.138, which means that the gap is in the low to very high category. Of the 10 needs for supervisory consultants on private projects, 1 of them is in the high gap category, 3 is in the medium gap category, and the remaining 6 are in the low gap category. This means that these 4 indicators will be needed for supervisory consultant services to improve their work

performance in the implementation of private projects. These 4 indicators are:

1. A = mastering contractor contract documents and supervising consultants
2. C = survey the existing condition
3. I = making payment certificate
4. J = evaluating contractor performance, reporting and submitting work

*Table 7. The gap in the Need for Supervisory Consultants on Private Projects*

	<b>SKKNI's Indicator</b>	<b>Important Criteria</b>	<b>Work Result</b>	<b>Gap</b>
A	Mastering contractor contract documents	0.268	0.161	0.107
B	Conducting initial construction/PCM meetings	0.209	0.174	0.035
C	Surveying existing conditions	0.319	0.257	0.062
D	Conducting a contractor readiness check for work implementation	0.152	0.124	0.028
E	Supervising the application of work methods per type of work	0.412	0.387	0.025
F	Conducting quality control, dimensions, costs, and time	0.600	0.608	-0.008
G	Conducting weekly and non-scheduled coordination meetings	0.220	0.214	0.005
H	Joint at the measurements of contractor's work for payments	0.180	0.217	-0.037
I	Providing payment certificates	0.174	0.164	0.010
J	Evaluating the work of contractors, reporting and submitting work	0.315	0.177	0.138

### 3.8 Formulating Efforts for improving the work performance of the supervisory consultants

The formulation efforts for improving the work performance of the supervisory consultants is conducted through focus group discussion (FGD) involving respondents taken from supervisory consultants. It aims to formulate efforts/solutions to increase the work of the supervisory consultant on government projects and private projects. Therefore, it will meet the expectations of the clients/owners as a service user. Table 8 explains 4 strategies for improving the work of supervisory consultants on government projects and private projects, namely:

1. Education and training, based on consumer needs, education and training for supervisory consultants are important to do. This training aims to improve the ability of consultants both in the use of methods, analysis, policies, and the latest technological developments in the construction world.
2. Managerial training, Managerial training needs to be given to supervisory consultants. This training will improve the ability in decision-making, problem-solving, and work ethic



Table 8. Efforts to Improve the Work Performance of Supervisory Consultants

No	Improvement Effort	Fulfilled Customer Needs
1	Education and training in terms of:	- Ability to understand contractor and supervisory consultant work agreement letters
	a. Contract document creation	- Ability to understand technical specifications
	b. The latest methods and techniques in construction	- Ability to understand CC (Contract Condition)
	c. Engineering drawings	- Ability to understand drawings and their implementation in the field
	d. Technical specifications	- Ability to perform value engineering
		- Ability to agree on the procedures for the management (administrative) elements of project implementation
2	Managerial training to improve managerial skills of supervisory consultants such as negotiation skills, decision making, work ethics, and problem-solving	- Ability to evaluate work plans and schedules and approve work methods proposed by contractors
		- Ability to equalize perceptions or interpretations of the contents of contract documents
		- Ability to conduct weekly and non-scheduled coordination meetings (special)
3	Availability of standard work procedures	- Ability to conduct surveys of existing field conditions
		- Ability to supervise the application of methods per type of work
		- Ability to perform value engineering
		- Ability to evaluate quality control, dimensions, cost, and time
4	Have an expert certificate	- Ability to perform value engineering
		- Ability to evaluate quality control, dimensions, cost, and time
		- Ability to evaluate the use of resources & facilities

3. Creation of standard work systems and procedures: Making systems and standard work procedures is very important to be implemented by supervisory consultants. These standard work systems and procedures will ensure that every job is carried out in a structured manner with clear work specifications. This standard work system and procedure will also ensure that the work is carried out with a minimum error rate so that the quality of the work will be guaranteed
4. Certificate of expertise: Certificate of expertise is important for every supervisory consultant to have. A certificate of expertise is a means to ensure that the supervisory consultant does have the expertise and ability in his field.

## V. CONCLUSION AND RECOMMENDATION

### 5.1 Conclusion

1. The evaluation of the construction supervisory consultants' works in the City of Denpasar, following the SKKNI indicators, suggests that:
  - a. On government projects, the work of the supervisory consulting service company is categorized as "very good", in 1 indicator, i.e. controlling quality, design dimensions, costs, and time. 2 indicators are characterized as "good", namely supervising the application of work methods per type of work and evaluating the work of contractors, reporting and job submission. There is 1 that is of "acceptable" value, namely mastering the contractor's contract documents. And there are 6 that are "poor", namely conducting initial

construction/PCM meetings, conducting surveys of existing conditions, checking contractor readiness for work implementation, conducting weekly and non-scheduled coordination meetings (special), taking joint measurements for payments, and making payment certificates.

- b. The results of the work of supervisory consulting service companies on private projects are that there is one that is of “very good” value, namely carrying out quality, dimension, cost, and time control. There is 1 which is of “acceptable” value, namely supervising the application of work methods per type of work) And there are 8 which are of “poor” value, namely mastering contractor contract documents, conducting initial construction/PCM meetings, conducting surveys of existing conditions, checking the readiness of contractors for work implementation, conducting coordination meetings weekly and non-scheduled rice (special), conducting joint measurements for payment, make payment certificates and evaluate the work of contractors, report and submit work. readiness of contractors to carry out work, conduct weekly and non-scheduled coordination meetings (special), take joint measurements for payments, and make payment certificates.
2. The criteria for consultants who perform well in accordance with client needs and meet customer satisfaction are:
    - a. The client's need for a supervisory consultant or it can be said that the level of interest in a supervisory consultant on a **government project** is that there is one that gets “very important” value, namely controlling quality, dimensions, costs, and time. 3 “important” values must be owned by supervisory consultants on government projects, namely mastering contractor contract documents and obtaining supervision consultants, supervising the application of work methods per type of work and evaluating contractor performance, and reporting and submitting work. while the remaining 6 received a “not important”, namely conducting initial construction/PCM meetings, conducting surveys of existing conditions, checking contractor readiness for work implementation, conducting weekly and non-scheduled coordination meetings (special), taking joint measurements for payments, and making incoming payment certificates. into the less important category owned by a supervisory consultant on a government project.

- b. The client's need for a supervisory consultant or it can be said that the level of interest in a supervisory consultant on a **private project** is that there are 1 who get “very important” values that a supervisory consultant must have, namely controlling quality, dimensions, costs and time. 3 “important” indicators must be owned by the supervisory consultant on government projects, namely: Conducting a survey of existing conditions with a score of 0.319, supervising the application of work methods per type of work, getting a score of 0.412, and evaluating contractor performance, reporting and submitting work. The remaining 6 received a “not important” assessment, namely mastering contractor contract documents and supervising consultants, conducting initial construction/PCM meetings, checking contractor readiness for work implementation, conducting weekly and non-scheduled coordination meetings (special), and taking joint measurements for payment and certificate making. payments fall into the category of less important owned by a supervisory consultant on government projects.

3. Efforts to improve the work of construction consultants in the city of Denpasar are based on the value of the results of the gap analysis on customer needs, so the characteristics of the consultant service needs are as follows:

- a. education and training
- b. managerial training
- c. creation of work systems and procedures
- d. certificate of expertise

#### 5.1 Suggestions

1. Further research can be conducted by also involving the planning consultant, with a wider coverage sample, or not limited to Denpasar.
2. The owner needs to communicate with the supervisory consultants regarding the competencies currently expected by the owner so that the owner will get a supervisory consultant with the expected competencies.

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